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EXAMINER				
DANG, HUNG Q				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,284

Applicant(s)

LEE ET AL.

Examiner

Hung Q. Dang

Art Unit

2621

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☐ Claim(s) 17-23 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF-08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 08/27/2008 have been fully considered but they are not persuasive.

On pages 7-8, regarding claim 17, Applicant argues that, "the combination of Osakabe in view of Maeda et al. and in further view of Kentaro is inappropriate as there is no suggestion or motivation to combine such references," and "[a]s there is no suggestion or motivation to combine, such combination of references cannot render obvious the invention" as recited. In response, the Examiner respectfully disagrees. The reasons are set forth below.

First, Osakabe discloses " recording, as reproduction-only data in a reproduction-only area, maximum recording speed information and minimum recording speed information, which is used to indicate speed capabilities to a drive (column 1, lines 41-44, 50 – column 2, line 35; column 5, lines 31-47) and their advantages as "the recording can be executed with minimized errors" (column 2, lines 29-30).

Second, Maeda discloses recording as reproduction-only data in a reproduction-only area, minimum reproducing speed information (column 9, lines 1-5, 36-39) with the advantages as "to consequently proper control of a reproducing operation."

Each of references teaches a different things with a different advantages that are not overlapped with each other. One is needed for recording while the other is desired for reproducing. Both advantages are clearly needed in a recording and reproducing

apparatus. Thus, the combination is not a result of using hindsight in contrast with Applicant's arguments.

Next, Kentaro discloses recording maximum reproducing speed information (abstract), and reproducing data on the information storage medium when a reproducing speed capability of the drive matches the maximum reproducing speed information (abstract) also with the advantages of proper control of reproducing operations. Although the advantages of Maeda's teachings and Kentaro's teachings are applied to the reproducing operations, it is clear that both help eliminate two different problems: one is caused when the reproducing speed is too low and the other is caused when the reproducing speed is too high. Both problems should be eliminated, thus the teachings of both Maeda and Kentaro should be combined.

Therefore, absolutely there is no hindsight involved in combining the references.

On page 8, regarding claim 27, Applicant argues that, the cited references do not disclose that "the drive system reads out the maximum recording speed information, the minimum recording speed information, the maximum reproducing speed information, and the minimum reproducing speed information ..." and "the combination of the references is inappropriate as discussed above with reference to claim 17." In response, the Examiner respectfully disagrees.

First of all, Osakabe in column 2, lines 26-30 states, "...using the recording speed set to a speed value within a range of the disk-applicable-recording speeds indicated by the disk-applicable-recording-speed information. Thus, the recording can be executed with minimized errors." As shown in the passage above, Osakabe

discloses using the maximum recording speed information and the minimum recording speed information to control the drive so that errors can be minimized. As a matter of facts, the drive system must read the information, which is recorded, before using it. Also as described in rejections of claim 17, Maeda discloses reproducing data on the information storage medium when a reproducing speed capability of the drive is equal to or between the minimum reproducing speed information in column 9, lines 59-67. This also involves the reading the information before using similar to the discussion of Osakabe above.

Next, the Examiner respectfully submits that the combination of Osakabe, Maeda, and Kentaro is appropriate with obvious motivations as described above. In view of the combination of Osakabe, Maeda, and Kentaro, i.e. having disclosed the method or a drive system for recording the maximum recording speed information, the minimum recording speed information, the maximum reproducing speed information, and the minimum reproducing speed information, the teachings of Osakabe can be extended as set forth in the Office Action, so that the maximum reproducing speed information, and the minimum reproducing speed information are also read out in the similar manner for controlling the system drive correctly during reproduction.

On pages 8-9, regarding claim 28, Applicant again argues that there is no suggestion or motivation to combine Osakabe, Maeda, Kentaro, and Komoda and "such combination of references is merely piece-meal construction using impermissible hindsight ..." In response, the Examiner respectfully disagrees. First, at least the combination of Osakabe, Maeda, and Kentaro is obvious as described in the discussion

of claim 17 above. Komoda is relied upon only to disclose processing schemes that are conventionally used during recording, i.e. modulation and amplifying, etc. These schemes are well known mechanism that physically record the data onto an optical disk. Without physical recording processing at the signal-level, the "data" is pure abstract ideas and useless. The reason to combine Komoda is absolutely obvious so that data can be transformed into physical formats.

On page 9, regarding claim 29, Applicant argues again that combination of Osakabe, Maeda, Kentaro, and Okada "is merely piece-meal construction using impermissible hindsight." In response, the Examiner respectfully disagrees. First, at least the combination of Osakabe, Maeda, and Kentaro is obvious as described in the discussion of claim 17 above. Okada is also relied upon only to disclose processing schemes that are conventionally used during recording and/or reproducing, i.e. performing error correction code usually known as ECC. The purpose of performing ECC is well known, i.e. for error corrections. Recording and/or reproducing with error-free data is always an important goal and usually required in practical designs. Therefore, in contrast with Applicant's arguments, combination of Osakabe, Maeda, Kentaro, and Okada absolutely is not a mere piece-meal construction using impermissible hindsight.

The reasons set forth above, Applicant's arguments are not persuasive. Therefore, the rejections stand as previously presented.

Allowable Subject Matter

Claim 24 allowed.

Claim 24 recites "the recording speed information and/or the reproducing speed information include maximum multiple speed data and minimum multiple speed data, the minimum multiple speed data being recorded in the first four bits of the 8 bits of an m-th byte of the reproduction-only area, and the maximum multiple speed data being recorded in the last four bits of the 8 bits of the m-th byte of the reproduction-only area." The prior art does not disclose or suggest this feature.

Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 30 recites "the recording speed information and/or the reproducing speed information include maximum multiple speed data and minimum multiple speed data, the minimum multiple speed data being recorded in four bits of the 8 bits of an m-th byte of the reproduction-only area, and the maximum multiple speed data being recorded in four bits of the 8 bits of the m-th byte of the reproduction-only area." The prior art does not disclose or suggest this feature.

Claim Objections

Applicant is advised that should claims 25 and 26 be found allowable, claims 25 and 26 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe (US Patent 6,894,961), Maeda et al. (US 6,072,759), and Akaha Kentaro (JP 2000-293931, references will be made herein to the English translation of its abstract).

Regarding claim 17, Osakabe discloses a method for recording and/or reproducing data in an information storage medium (column 2, lines 11-17), the method comprising: recording, as reproduction-only data in a reproduction-only area, maximum recording speed information and minimum recording speed information, which is used to indicate speed capabilities to a drive (column 1, lines 41-44, 50 – column 2, line 35; column 5, lines 31-47); and recording data on the information storage medium when a recording speed capability of the drive is equal to or between the maximum recording speed information and the minimum recording speed information (Fig. 3; column 2, lines 11-35; column 8, lines 35-61).

However, Osakabe does not disclose maximum reproducing speed information, minimum reproducing speed information, and reproducing data on the information storage medium when a reproducing speed capability of the drive matches the

maximum reproducing speed information and the minimum reproducing speed information.

Maeda et al. disclose recording as reproduction-only data in a reproduction-only area, minimum reproducing speed information (column 9, lines 1-5, 36-39), and reproducing data on the information storage medium when a reproducing speed capability of the drive is equal to or between the minimum reproducing speed information (column 9, lines 59-67).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the minimum reproducing speed information disclosed by Maeda et al. into the method of recording and reproducing disclosed by Osakabe in order to enable proper control of a reproducing operation (Maeda et al., column 9, lines 60-65).

However, the proposed combination of Osakabe and Maeda et al. does not disclose recording as reproduction-only data in a reproduction-only area, maximum reproducing speed information, and reproducing data on the information storage medium when a reproducing speed capability of the drive matches the maximum reproducing speed information.

Akaha Kentaro discloses recording maximum reproducing speed information (abstract), and reproducing data on the information storage medium when a reproducing speed capability of the drive matches the maximum reproducing speed information (abstract).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the maximum reproducing speed information disclosed by Akaha Kentaro into the method of recording and reproducing disclosed by Osakabe and Maeda et al. in order to enable proper control of a reproducing operation (Akaha Kentaro, abstract).

Regarding claim 18, Osakabe also discloses the recording and/or reproducing are performed by the drive (Fig. 3; column 8, lines 35-61), and wherein the drive and the information storage medium are based on different standards (column 5, lines 19-24).

Regarding claim 19, Osakabe also discloses the recording speed information and/or the reproducing speed information are recorded in at least one byte of the reproduction-only area (column 6, lines 46-56).

Regarding claim 20, Osakabe also discloses the information storage medium includes a lead-in area (column 5, lines 45-47), a user data area (column 2, lines 8-10; column 4, lines 59-61), and a lead-out area (column 5, lines 45-47), and the recording speed information and/or the reproducing speed information is recorded in a reproduction-only area formed in at least one of the lead-in and lead-out areas (column 5, lines 45-47).

Regarding claim 21, Osakabe also discloses the recording speed information and/or the reproducing speed information is recorded in both the lead-in and the lead-out areas (column 5, lines 45-47).

Regarding claim 22, Osakabe also discloses the reproduction-only area is a disk control data zone (column 5, lines 19-47).

Regarding claim 23, the proposed combination of Osakabe, Maeda et al., and Akaha Kentaro also discloses the maximum recording speed information, the minimum recording speed information, the maximum reproducing speed information, and the minimum reproducing speed information include maximum multiple speed data (as discussed in claim 17 above, it is natural that the maximum recording speed information disclosed by Osakabe and the maximum reproducing speed information disclosed by Akaha Kentaro constitute maximum multiple speed data) and minimum multiple speed data (as discussed in claim 17 above, it is natural that the minimum recording speed information disclosed by Osakabe and the minimum reproducing speed information disclosed by Maeda et al. constitute maximum multiple speed data), the minimum multiple speed data being recorded in an m-th byte of the reproduction-only area (it is inherent that to record the minimum multiple speed data, at least a portion of a byte must be used. This byte corresponds to an m-th byte recited), and the maximum multiple speed data being recorded in an n-th byte of the reproduction-only area (it is inherent that to record the maximum multiple speed data, at least a byte must be used. This byte corresponds to the n-th byte recited).

Regarding claim 25, Maeda et al. also disclose a piece of speed information is recorded in one byte of the reproduction-only area. One of ordinary skill in the art at would recognize to record three other pieces of speed information in three other bytes.

Claim 26 is rejected for the same reason as discussed in claim 25 above.

Claim 27 is rejected for the same reason as discussed in claim 17 above in further consideration of Osakabe also disclosing a drive system for recording and/or

reproducing data on an information storage medium (Fig. 1) having a reproduction-only area in which recording speed information and/or reproducing speed information which indicates whether a drive can record and/or reproduce data on the information storage medium are recorded (column 1, lines 39-49; column 5, lines 45-47), comprising: a pickup which records and/or reproduces the data from the information storage medium (Fig. 1; column 8, lines 25-34); wherein, when the information storage medium has been inserted into the drive system, the drive system reads out the recording speed information and/or reproducing speed information and records and/or reproduces data according to a recording speed information and/or reproducing speed information (Fig. 3; column 8, lines 35-61; also see "Response to Arguments" above).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe (US Patent 6,894,961), Maeda et al. (US 6,072,759), Akaha Kentaro (JP 2000-293931) and Komoda et al. (US Patent 6,701,063).

Regarding claim 28, see the teachings of Osakabe, Maeda et al., and Akaha Kentaro as discussed in claim 17 above in further consideration of Maeda et al. also disclosing a drive system for recording data on an information storage medium (column 22, lines 41-67), comprising: an audio/video (AV) encoder which compresses an AV signal according to a specified compression scheme and outputs compressed AV data (column 22, lines 41-63; Fig. 16; Fig. 25); a digital signal processor which receives the compressed AV data, adds data for electronic code correction (ECC) processing to the compressed AV data (column 18, lines 40-42), wherein the data recorded in a reproduction-only area of the information storage medium includes recording speed

information and/or reproducing speed information (column 9, lines 1-5, 36-39; column 9, lines 35-39).

However, the proposed combination of Osakabe, Maeda et al., and Akaha Kentaro does not disclose the digital signal processor to modulates the resulting data according to a specified modulation scheme and outputs modulated data; a radio frequency (RF) amplifier which converts the modulated data into an RF signal; and a pickup which records the RF signal on the information storage medium.

Komoda et al. disclose a digital signal processor to modulates the resulting data according to a specified modulation scheme and outputs modulated data (column 2, lines 20-23); a radio frequency (RF) amplifier which converts the modulated data into an RF signal (column 2, lines 22-24); and a pickup which records the RF signal on the information storage medium (column 2, lines 24-26).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the digital signal processor to modulate and output of the data, the RF amplifier, and the pickup to record the signal on the information storage medium disclosed by Komoda et al. into the drive system disclosed by Osakabe, Maeda et al., and Akaha Kentaro. The incorporated feature is necessary to optimize the recording onto the recording medium.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe (US Patent 6,894,961), Maeda et al. (US 6,072,759), Akaha Kentaro (JP 2000-293931), and Okada et al. (US Patent 6,148,140).

Regarding claim 29, see the teachings of Osakabe, Maeda et al., and Akaha Kentaro as discussed in claim 17 above in further consideration of Maeda et al. also disclosing a drive system (Fig. 22; Fig. 23A; Fig. 37A) for reproducing data recorded on an information storage medium (column 2, line 50 – column 3, line 7), comprising; a pickup which detects an optical signal from the information storage medium (Fig. 22; Fig. 23A; Fig. 37A; column 19, lines 47-55); a radio frequency (RF) amplifier which converts the optical signal into an RF signal of modulated data and outputs the RF signal (Fig. 23A; column 19, lines 56-66); a digital signal processor which demodulates the modulated data according to a modulation scheme (column 20, lines 22-32), and outputs compressed audio/video (AV) (column 19, lines 65-66; column 21, line 65 – column 22, line 1, 35-26); and an AV decoder which decodes the compressed AV data and outputs an AV signal (column 21, line 65 – column 22, line 6; column 22, lines 25-40), wherein the reproduced data includes recording speed information and/or reproducing speed information recorded in a reproduction-only area of the information storage medium (column 9, lines 1-5, 36-39; column 9, lines 35-39).

However, the proposed combination of Osakabe, Maeda et al., and Akaha Kentaro does not disclose performing error correction code (ECC) processing.

Okada et al. disclose a digital signal processor, which performs error correction code (ECC) (column 35, lines 29-34).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the step of performing error correction code (ECC) disclosed by Okada et al. into the system disclosed by Osakabe, Maeda et al., and

Akaha Kentaro to correct any errors occurring in the data. The incorporated feature would enhance the integrity of the data.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621